

REMARKS

Reconsideration of the above-identified application in view of the amendment above and the remarks below is respectfully requested.

Claims 9, 14 and 22 have been canceled in this paper. Claims 1, 13, 20, 21, 25 and 28 have been amended in this paper. No claims have been added in this paper. Therefore, claims 1-8, 10-13, 15-21 and 23-29 are pending and under active consideration.

Claims 25-29 stand rejected under 35 U.S.C. 101 “because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101.” In support of the rejection, the Patent Office states the following:

Claims 25 and 28 do not set forth any steps involved with the use/process. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966). Here, the independent claims (Claims 25 and 28) recite a use, but are effectively product-by-process limitations. All claims depending therefrom import the ambiguities of Claims 25 and 28.

Without acquiescing in the propriety of the rejection, Applicants have amended claims 25 and 28 so that they are no longer use claims. Therefore, the rejection is moot and should be withdrawn.

Claims 5, 21-22 and 25-29 stand rejected under 35 U.S.C. 112, second paragraph, “as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.” In support of the rejection, the Patent Office states the following:

The term “normal pressure” in Claim 5 is a relative term which renders the claim indefinite. The term “normal pressure” is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

With respect to Claim 21, the scope of the claim is unclear. The language in the claim is a hybrid product-by-process and “product-by-apparatus” claim, i.e., “produced with the method according to claim 1 or with a plasmatron...” While product-by-process claims are permitted and a scope can be assigned to that claim, a product-by-apparatus claim does not limit the product. For example, what if the plasmatron is not “plugged in?”

With respect to Claim 22, the comparison is not understood, and is akin to a relative term not defined by the Specification. No standard for ascertaining the “unmodified edges” was set forth in the disclosure, and as such, determination of what is “rounded” relative to that is not possible.

Claim 25-29 provides for the use of “a carbon material,” but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced. These claims share the same hybrid product-by-process and product-by-apparatus language discussed with respect to Claim 21. Dependent claims import the ambiguities of the independent claims.

Applicants respectfully traverse the subject rejection.

Insofar as the subject rejection relates to claim 5, Applicants respectfully submit that the term “normal pressure” is well-known and commonly used by those of ordinary skill in the art. “Normal pressure” is standard pressure, which is 1.01325 bar or 101.325 Pa.

Insofar as the subject rejection relates to claim 21, Applicants respectfully submit that the present amendment to claim 21 obviates this basis for the rejection.

Insofar as the subject rejection relates to claim 22, Applicants respectfully submit that, in view of the present specification, for example, at page 15, last paragraph, one of ordinary skill in the art would understand what is meant by the claim.

Insofar as the subject rejection relates to claims 25-29, Applicants respectfully submit that, in view of the present amendments to claims 25 and 28, one of ordinary skill in the art would understand what is meant by these claims.

Accordingly, for at least the above reasons, the subject rejection should be withdrawn.

Claims 1-2, 5-6, 8-12 and 20 stand rejected under 35 U.S.C. 102(b) “as being anticipated by Takada, et al., Surface Modification and Characterization of Carbon Black With Oxygen Plasma, Carbon 1996; 34(9):1087-1091 (hereinafter ‘Takada at __’).”

Applicants respectfully traverse the subject rejection. Takada describes in chapter “2. Experimental” that carbon material is exposed to a plasma, said plasma being generated by use of a high-frequency field and a plasma gas. However, Takada does not teach that the plasma gas has a particular oxygen content. By contrast, claim 1 has been amended in this paper to recite that the oxygen content in the plasma gas is in the range from 0.01 to 10 vol %. Applicants have found that using a plasma gas with an oxygen content in this claimed range enables one to achieve the desired modifications.

Takada does not give any hint as to the oxygen content within the plasma gas. Takada only describes that oxygen is introduced within the reactor chamber. In this respect, Takada does not give any details relating to specific values of the oxygen content. In addition, Takada does not give any hint that the plasma gas used shall comprise a specific oxygen content.

Accordingly, for at least the above reasons, the subject rejection should be withdrawn.

Claims 13-18 stand rejected under 35 U.S.C. 102(b) “as being anticipated by US 4,673,589 to Standley.”

Applicants respectfully traverse the subject rejection. Claim 13 has been amended in this paper to include the features of canceled claim 14 and to depend from claim 1. Thus amended, claim 13 is neither taught nor suggested by Standley.

Accordingly, for at least the above reasons, the subject rejection should be withdrawn.

Claims 1-4 stand rejected under 35 U.S.C. 102(b) “as being anticipated by US 2003/0082094 to Loufty, et al.”

Applicants respectfully traverse the subject rejection. Loufty does not teach or suggest that the plasma gas used has a specific oxygen content, let alone the specific oxygen content recited in claim 1.

Accordingly, for at least the above reasons, the subject rejection should be withdrawn.

Claims 20-24 stand rejected under 35 U.S.C. 102(b) “as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Takada, et al., Surface Modification and Characterization of Carbon Black With Oxygen Plasma,” Carbon 1996; 34(9):1087-1091.”

Applicants respectfully traverse the subject rejection. Claim 22 has been amended to include the features of canceled claim 20. Takada does not teach or suggest that the modified edges have a rounded shape in comparison to unmodified edges.

Accordingly, for at least the above reasons, the subject rejection should be withdrawn.

Claims 25-29 stand rejected under 35 U.S.C. 103(a) “as being unpatentable over Takada, et al., Surface Modification and Characterization of Carbon Black With Oxygen Plasma, Carbon 1996; 34(9):1087-1091 in view of US 5,028,500 to Fong, et al.”

Applicants respectfully traverse the subject rejection. Takada and Fong, taken individually or in combination, do not teach or suggest the electrode material of claim 25 or the additive of claim 28, both of which depend from claim 20.

Accordingly, for at least the above reasons, the subject rejection should be withdrawn.

Claims 13 and 19 stand rejected under 35 U.S.C. 102(b) “as being anticipated by US 2003/0200742 to Smaling in view of US 5,409,784 to Bromberg.”

Applicants respectfully traverse the subject rejection. Claim 13, from which claim 19 depends, has been amended herein to depend from claim 1. Applicants respectfully submit that claim 13, as amended, is not by the combination of Smaling and Bromberg.

Accordingly, for at least the above reasons, the subject rejection should be withdrawn.

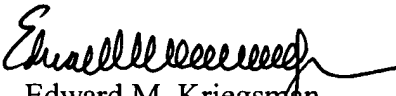
It is respectfully submitted that the present application is in condition for allowance. Prompt and favorable action is earnestly solicited.

If there are any fees due in connection with the filing of this paper that are not accounted for, the Examiner is authorized to charge the fees to our Deposit Account No. 11-1755. If a fee is

required for an extension of time under 37 C.F.R. 1.136 that is not accounted for already, such an extension of time is requested and the fee should also be charged to our Deposit Account.

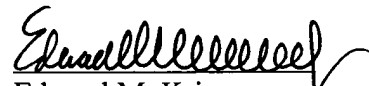
Respectfully submitted,

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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on June 17, 2010.


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